

What Is Claimed Is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:
 - (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -55 to about 331 in SEQ ID NO:2;
 - (b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -54 to about 331 in SEQ ID NO:2;
 - (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 331 in SEQ ID NO:2;
 - (d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
 - (e) a nucleotide sequence encoding the mature TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
 - (f) a nucleotide sequence encoding the TR10 extracellular domain;
 - (g) a nucleotide sequence encoding the TR10 transmembrane domain;
 - (h) a nucleotide sequence encoding the TR10 intracellular domain;
 - (i) a nucleotide sequence encoding the TR10 receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
 - (j) a nucleotide sequence encoding the partial TR10 death domain; and
 - (k) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).
2. The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1.
3. The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the TR10 receptor having the amino acid sequence in SEQ ID NO:2.
4. The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the mature TR10 receptor having the amino acid sequence in SEQ ID NO:2.
5. The nucleic acid molecule of claim 1, wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC Deposit No. 209040.

6. The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the TR10 receptor having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040.

7. The nucleic acid molecule of claim 1, wherein said polynucleotide has the nucleotide sequence encoding the mature TR10 receptor having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040.

8. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), or (k) of claim 1, wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

9. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a TR10 receptor having an amino acid sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j) of claim 1.

10. The isolated nucleic acid molecule of claim 9, which encodes an epitope-bearing portion of a TR10 receptor selected from the group consisting of: a polypeptide comprising amino acid residues from about 2 to about 58 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 75 to about 142 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 195 to about 228 in SEQ ID NO:2.

11. The isolated nucleic acid molecule of claim 1, which encodes the TR10 receptor extracellular domain.

12. The isolated nucleic acid molecule of claim 1, which encodes the TR10 receptor transmembrane domain.

13. The isolated nucleic acid molecule of claim 1, which encodes the TR10 receptor intracellular domain.

14. An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected from the group consisting of:

(a) the nucleotide sequence of clone HSABD50R (SEQ ID NO:7);
(b) the nucleotide sequence of clone HGBDL20R (SEQ ID NO:8);
(c) the nucleotide sequence of clone HELDL61R (SEQ ID NO:9); and
(d) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), or (c) above.

15. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

16. A recombinant vector produced by the method of claim 15.

17. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 16 into a host cell.

18. A recombinant host cell produced by the method of claim 17.

19. A recombinant method for producing a TR10 polypeptide, comprising culturing the recombinant host cell of claim 18 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

20. An isolated TR10 polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

(a) amino acids from about -55 to about 331 in SEQ ID NO:2;
(b) amino acids from about - 54 to about 331 in SEQ ID NO:2;
(c) amino acids from about 1 to about 331 in SEQ ID NO:2;
(d) the amino acid sequence of the TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
(e) the amino acid sequence of the mature TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
(f) the amino acid sequence of the TR10 receptor extracellular domain;
(g) the amino acid sequence of the TR10 receptor transmembrane domain;
(h) the amino acid sequence of the TR10 receptor intracellular domain;
(i) the amino acid sequence of the TR10 receptor intracellular and extracellular domains with all or part of the transmembrane domain deleted;
(j) the amino acid sequence of the TR10 receptor death domain; and
(k) the amino acid sequence of an epitope-bearing portion of any one of the

polypeptides of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

21. An isolated polypeptide comprising an epitope-bearing portion of the TR10 receptor protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acid residues from about 2 to about 58 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 75 to about 142 in SEQ ID NO:2; and a polypeptide comprising amino acid residues from about 195 to about 228 in SEQ ID NO:2

22. An isolated antibody that binds specifically to a TR10 receptor polypeptide of claim 20.

23. A method of treating diseases and disorders involving increased apoptosis comprising administering an effective amount of the polypeptide as claimed in claim 20, or an agonist thereof to a patient in need thereof.

24. A method of treating diseases and disorders involving decreased apoptosis comprising administering to a patient in need thereof an effective amount of an antagonist of the polypeptide as claimed in claim 20 to a patient in need thereof.

25. A method of treating inflammatory diseases and disorders comprising administering to a patient in need thereof an effective amount of an agonist of the polypeptide as claimed in claim 20.

26. An isolated nucleic acid molecule comprising a polynucleotide encoding a TR10 receptor polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -55 to about 331 in SEQ ID NO:2;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -54 to about 331 in SEQ ID NO:2;

(c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 331 in SEQ ID NO:2;

(d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;

(e) a nucleotide sequence encoding the mature TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;

- (f) a nucleotide sequence encoding the TR10 extracellular domain;
- (g) a nucleotide sequence encoding the TR10 transmembrane domain;
- (h) a nucleotide sequence encoding the TR10 intracellular domain;
- (i) a nucleotide sequence encoding the TR10 receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
- (j) a nucleotide sequence encoding the TR10 partial death domain; and
- (k) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

27. An isolated TR10 receptor polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

- (a) amino acids from about -55 to about 331 in SEQ ID NO:2;
- (b) amino acids from about -54 to about 331 in SEQ ID NO:2;
- (c) amino acids from about 1 to about 331 in SEQ ID NO:2;
- (d) the amino acid sequence of the TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
- (e) the amino acid sequence of the mature TR10 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209040;
- (f) the amino acid sequence of the TR10 receptor extracellular domain;
- (g) the amino acid sequence of the TR10 receptor transmembrane domain;
- (h) the amino acid sequence of the TR10 receptor intracellular domain;
- (i) the amino acid sequence of the TR10 receptor extracellular and intracellular domains with all or part of the transmembrane domain deleted;
- (j) the amino acid sequence of the TR10 receptor partial death domain; and
- (k) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

20070214-1009